

FIG. 1
PRIOR ART

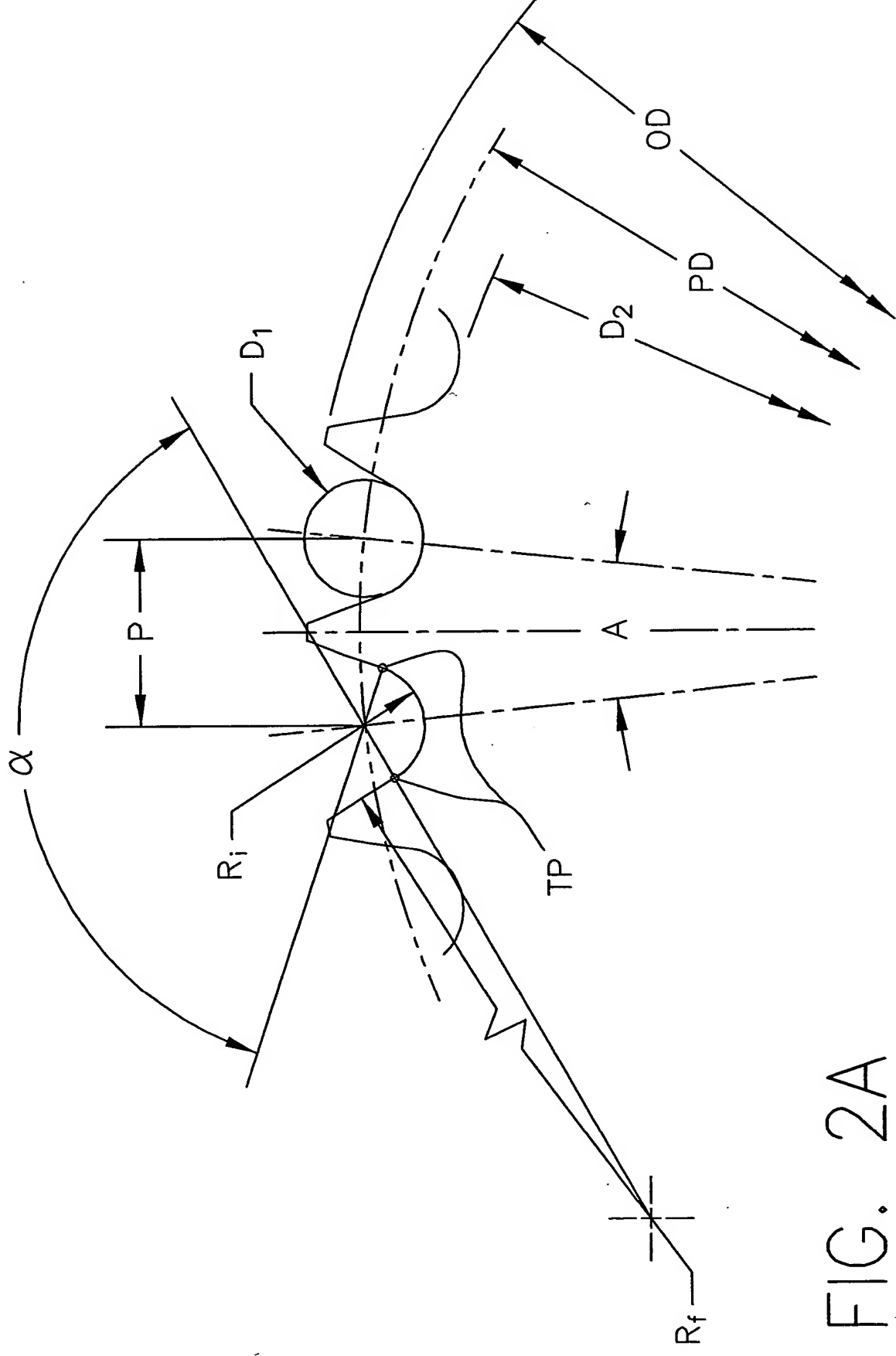


FIG. 2A
PRIOR ART

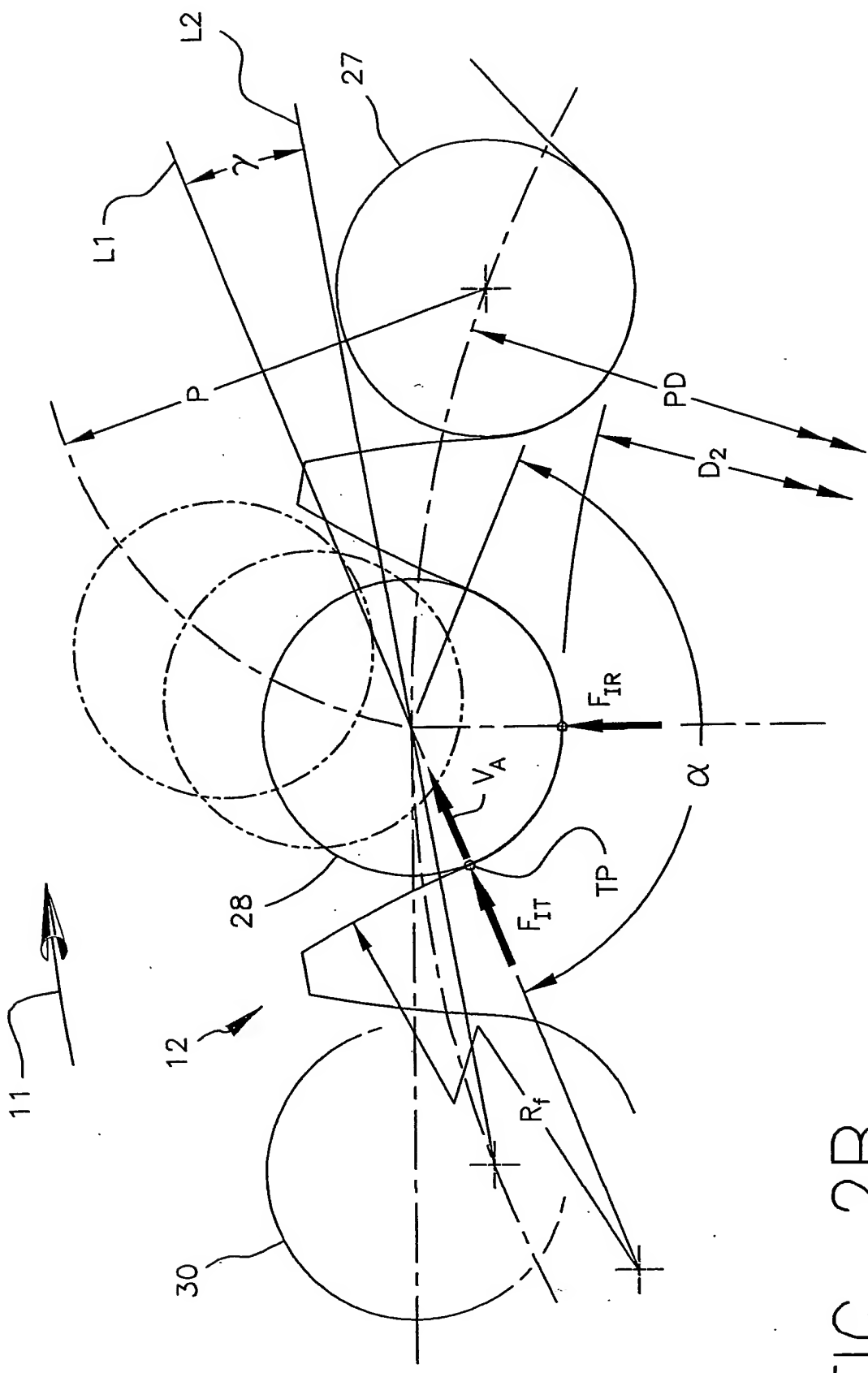


FIG. 2B
PRIOR ART

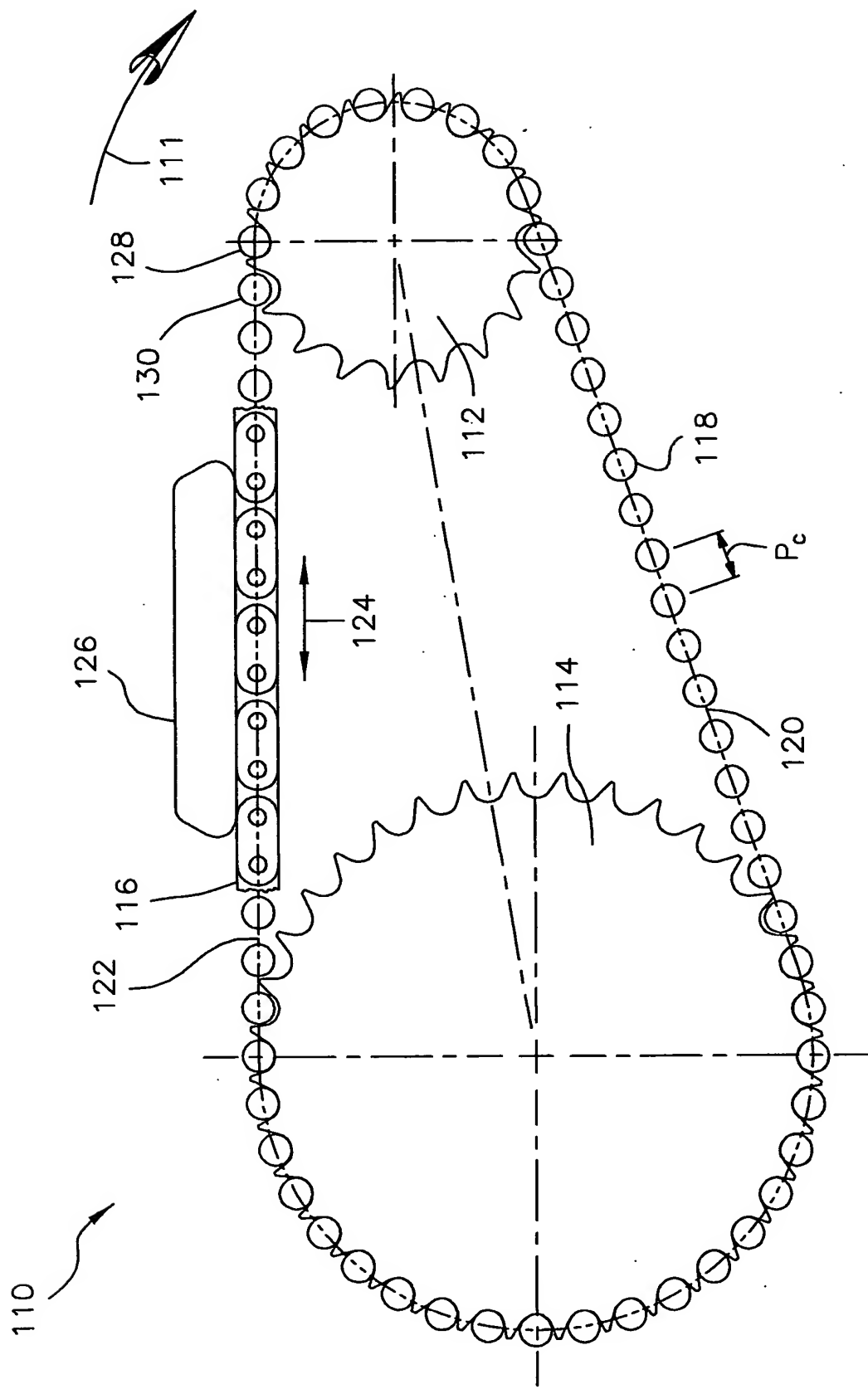


FIG. 3

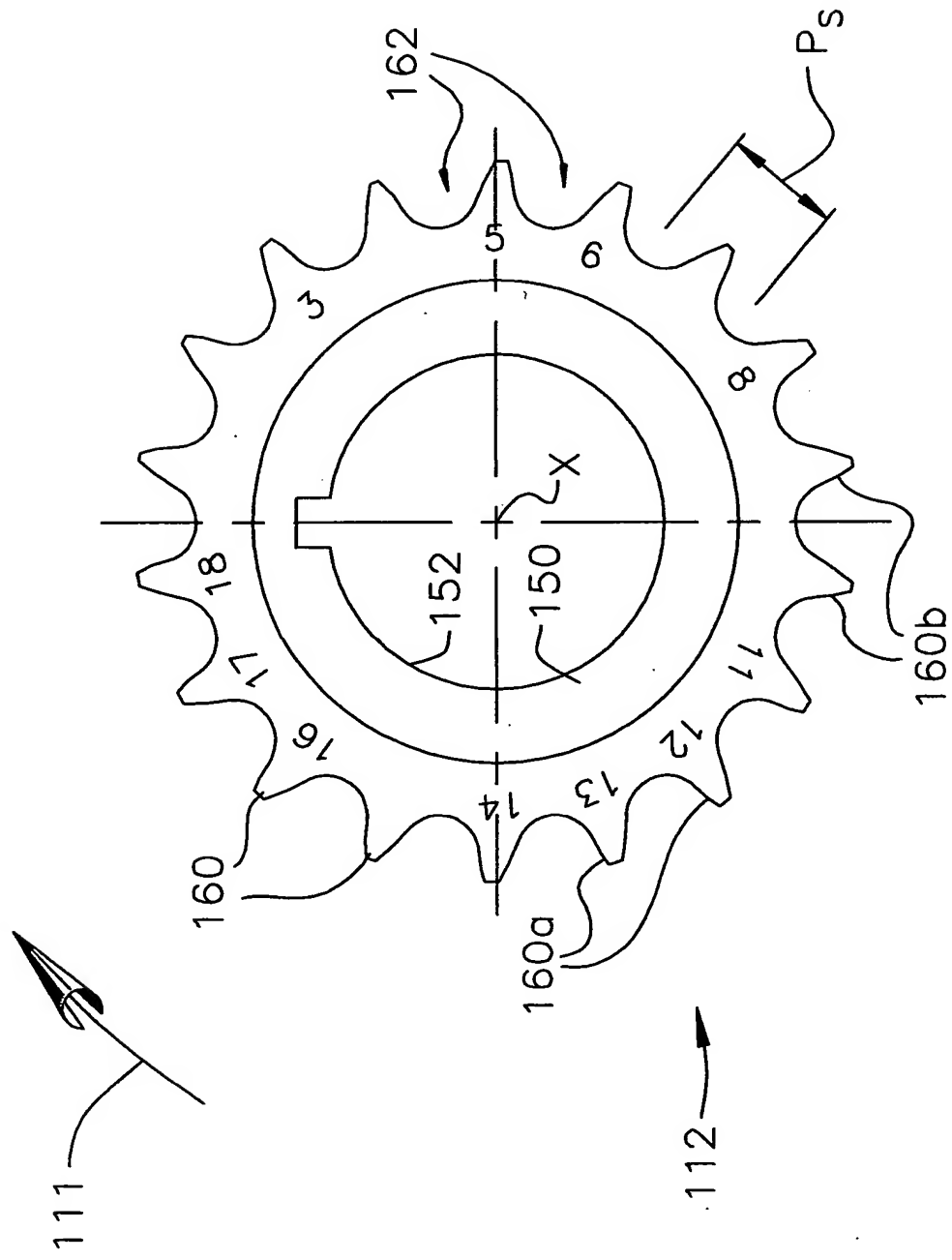


FIG. 4

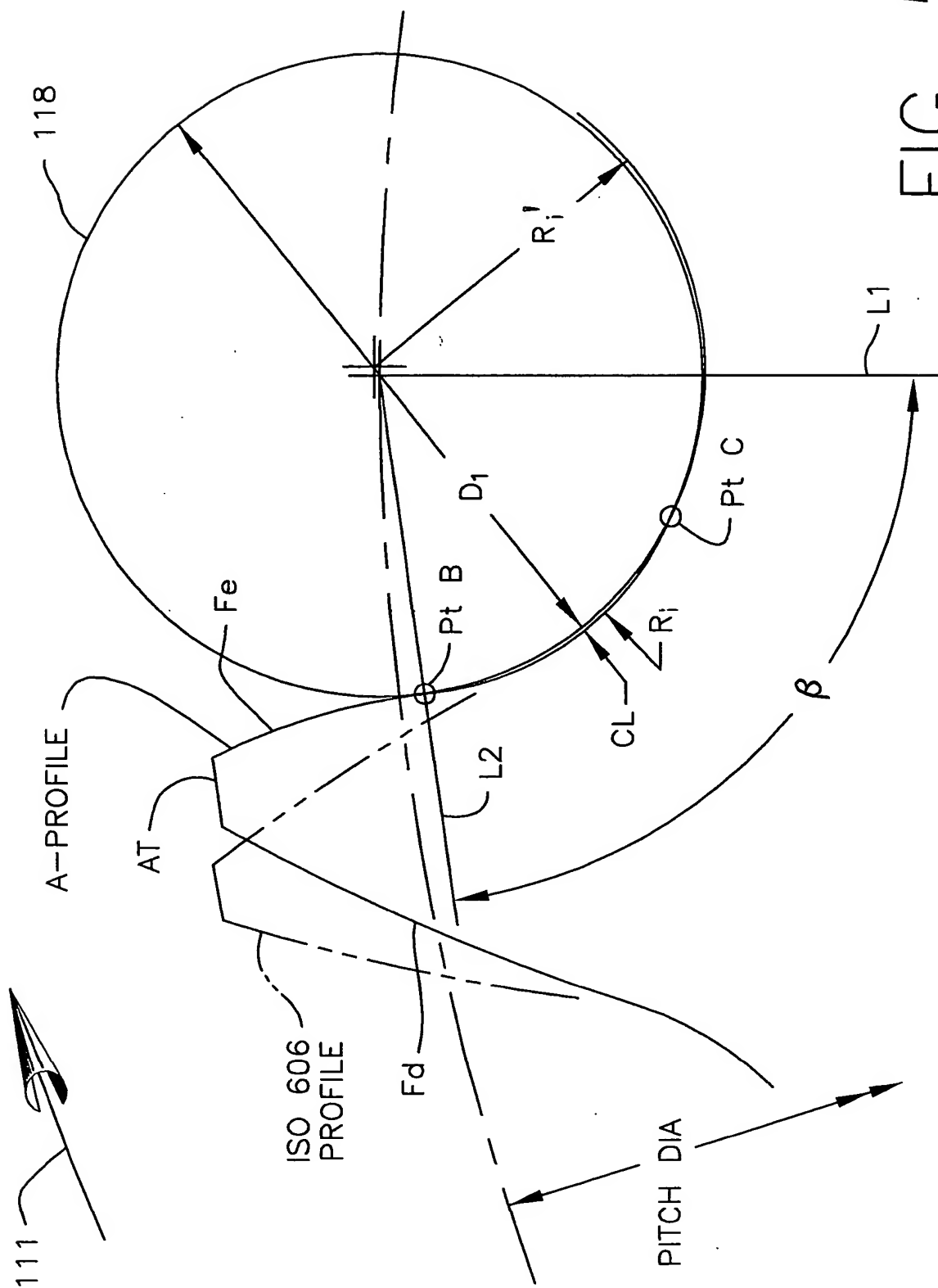


FIG. 5A

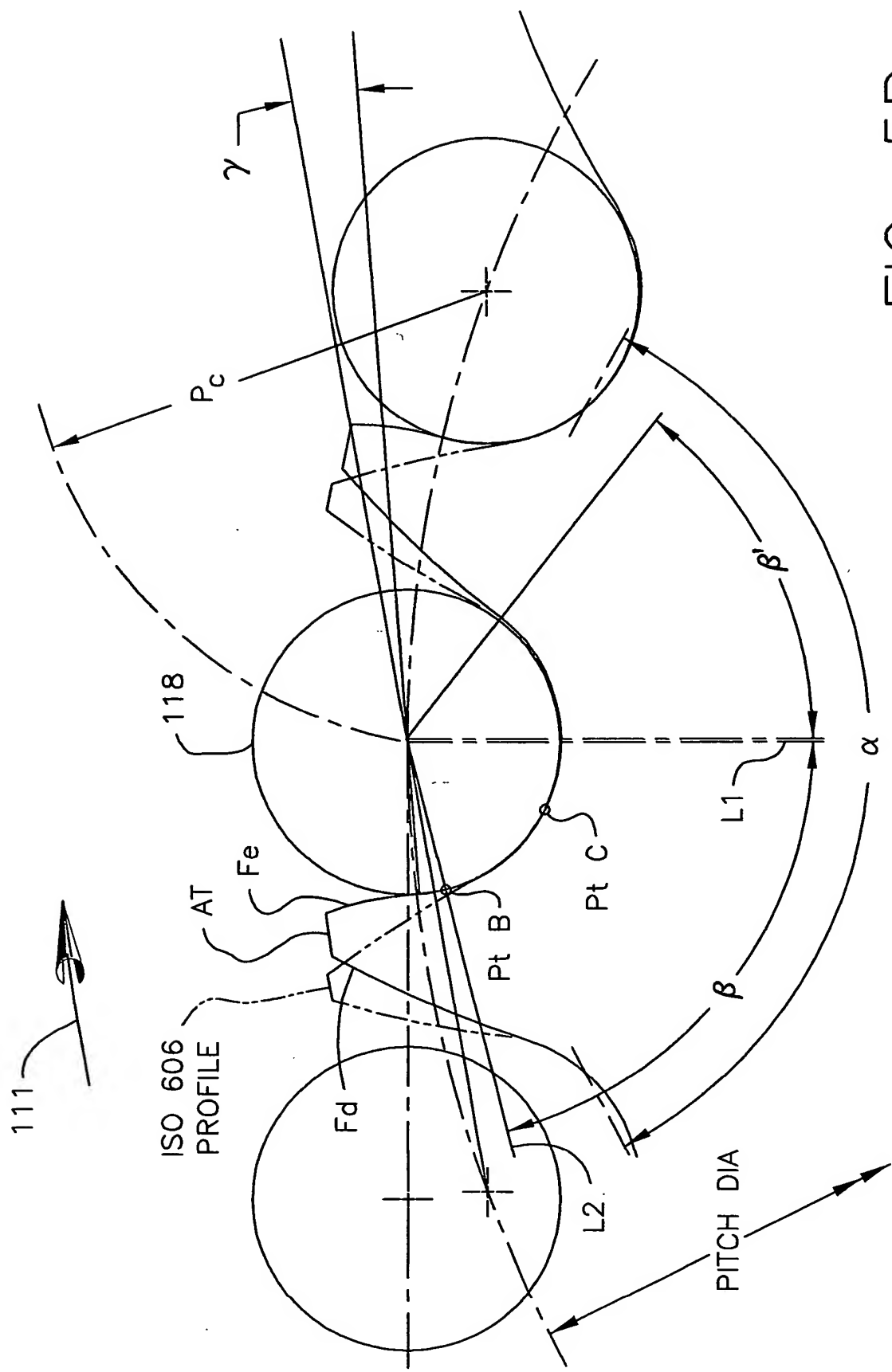


FIG. 5B

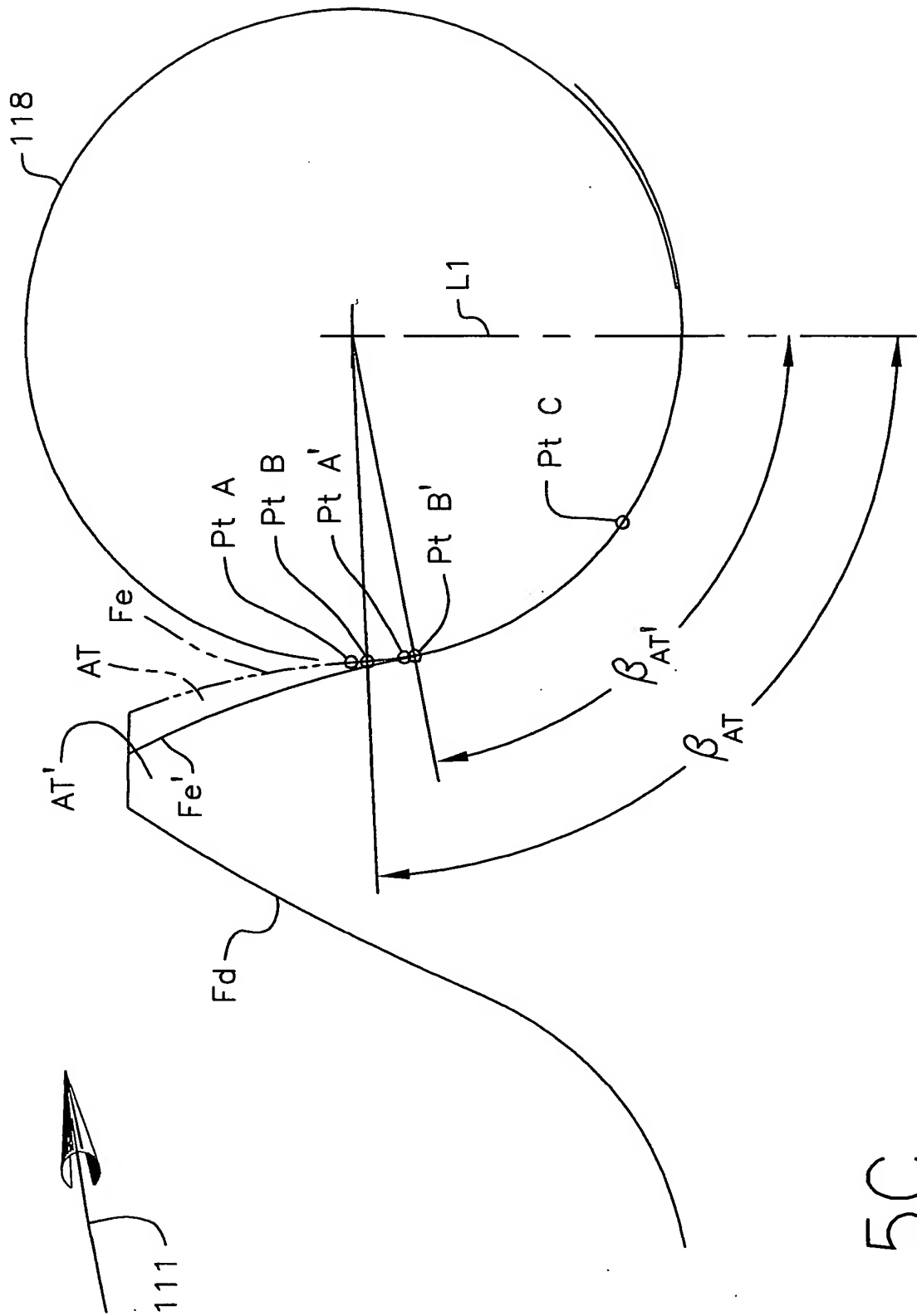


FIG. 5C

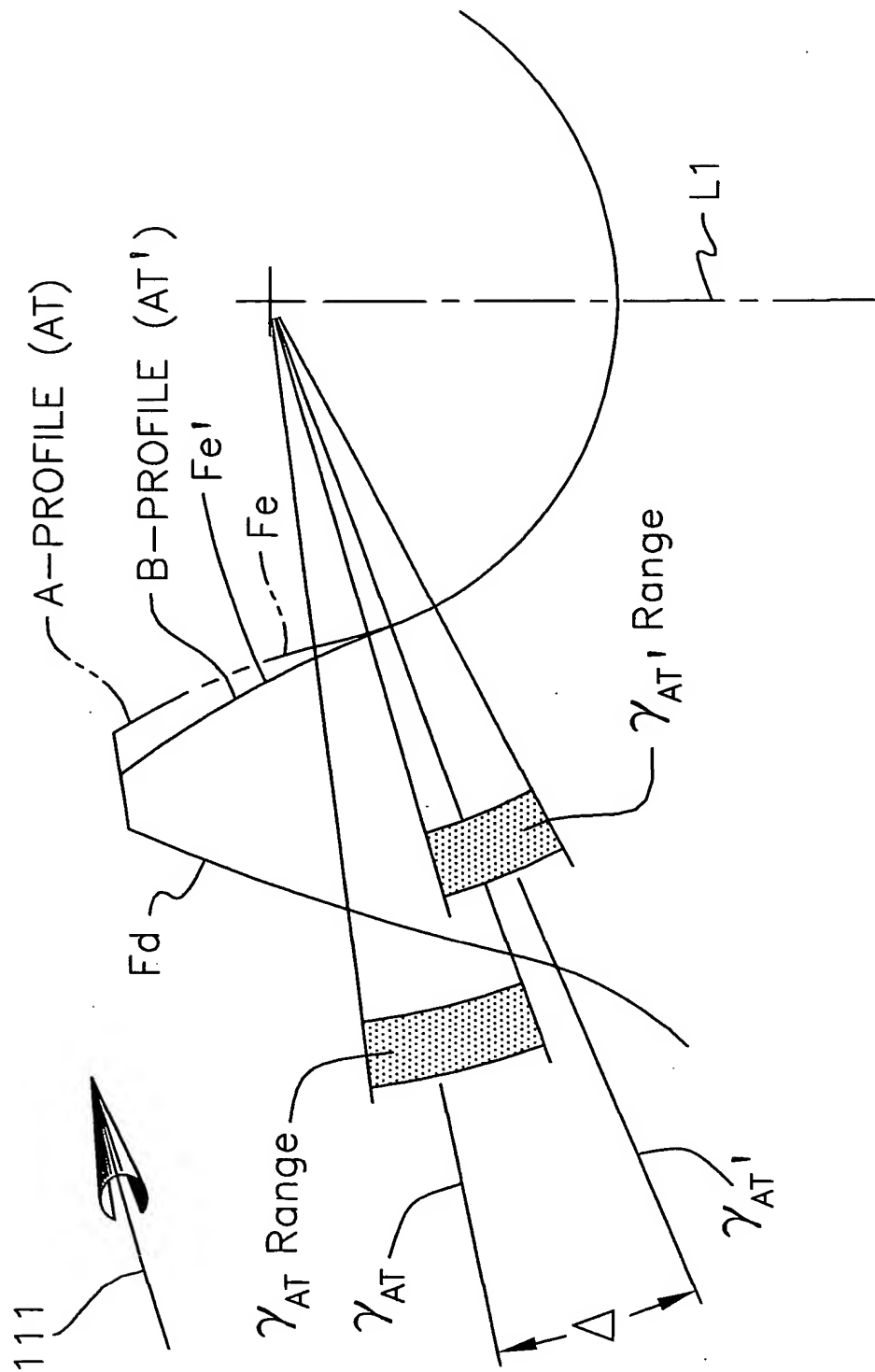


FIG. 6A

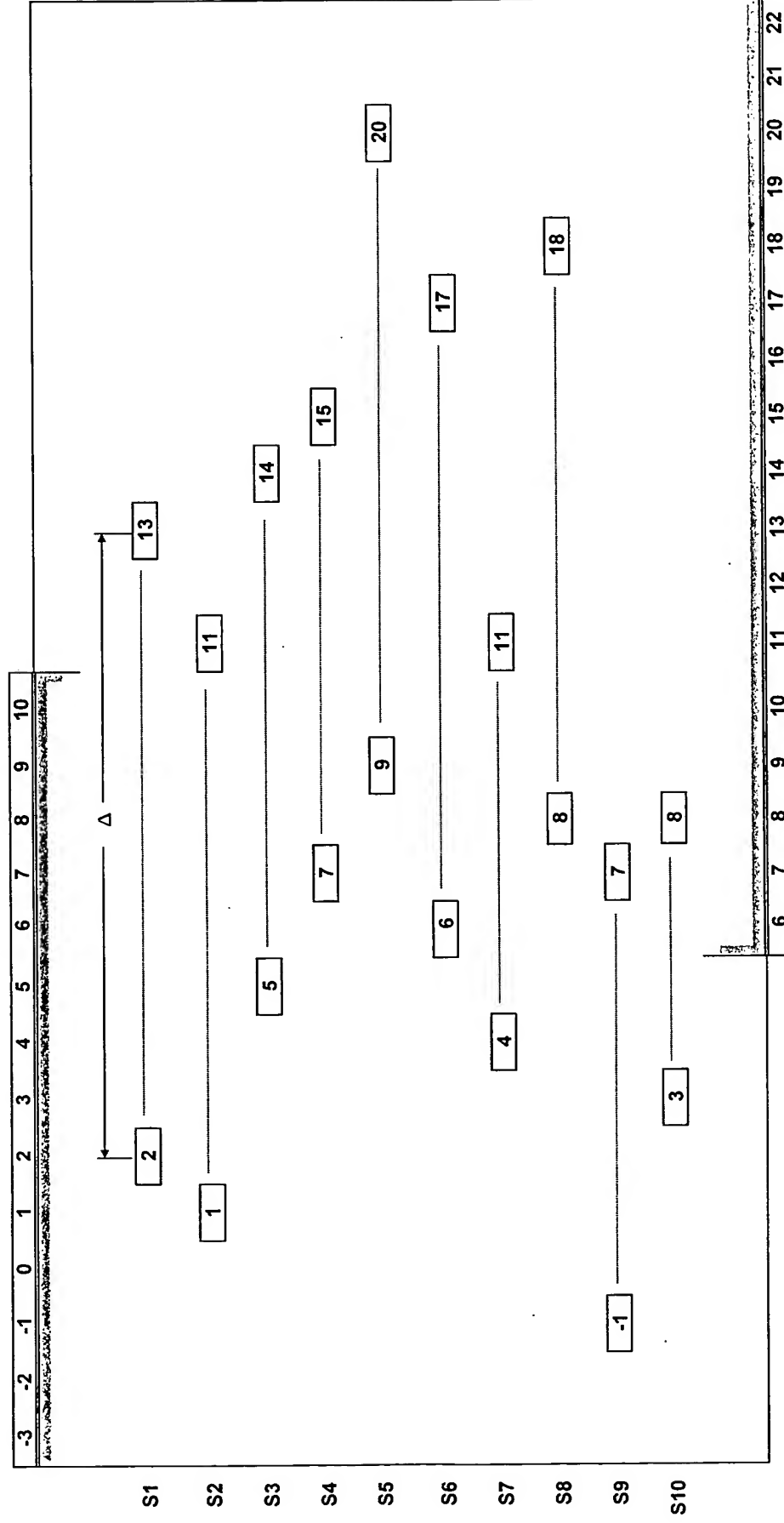
RANDOM - ASYMMETRIC

"A" PROFILE(γ_{AT})						"B" PROFILE(γ_{AT}')			
Z	A	β_{AT} (MAX)	γ_{AT} (MIN)	β_{AT} (MIN)	γ_{AT} (MAX)	β_{AT}' (MAX)	γ_{AT}' (MIN)	β_{AT}' (MIN)	γ_{AT}' (MAX)
18	20.000	83.00	-3.0	70.00	10.0	74.00	6.0	62.10	17.90
19	18.947	83.53	-3.0	70.53	10.0	74.53	6.0	62.24	18.28
20	18.000	84.00	-3.0	71.00	10.0	75.00	6.0	62.37	18.63
21	17.143	84.43	-3.0	71.43	10.0	75.43	6.0	62.49	18.94
22	16.364	84.82	-3.0	71.82	10.0	75.82	6.0	62.59	19.23
23	15.652	85.17	-3.0	72.17	10.0	76.17	6.0	62.69	19.49
24	15.000	85.50	-3.0	72.50	10.0	76.50	6.0	62.78	19.73
25	14.400	85.80	-3.0	72.80	10.0	76.80	6.0	62.86	19.94
26	13.846	86.08	-3.0	73.08	10.0	77.08	6.0	62.93	20.15
27	13.333	86.33	-3.0	73.33	10.0	77.33	6.0	63.00	20.33
28	12.857	86.57	-3.0	73.57	10.0	77.57	6.0	63.06	20.51
29	12.414	86.79	-3.0	73.79	10.0	77.79	6.0	63.12	20.67
30	12.000	87.00	-3.0	74.00	10.0	78.00	6.0	63.18	20.82
31	11.613	87.19	-3.0	74.19	10.0	78.19	6.0	63.23	20.96
32	11.250	87.38	-3.0	74.38	10.0	78.38	6.0	63.28	21.09
33	10.909	87.55	-3.0	74.55	10.0	78.55	6.0	63.33	21.22
34	10.588	87.71	-3.0	74.71	10.0	78.71	6.0	63.37	21.34
36	10.000	88.00	-3.0	75.00	10.0	79.00	6.0	63.45	21.55
38	9.474	88.26	-3.0	75.26	10.0	79.26	6.0	63.52	21.74
40	9.000	88.50	-3.0	75.50	10.0	79.50	6.0	63.59	21.92
42	8.571	88.71	-3.0	75.71	10.0	79.71	6.0	63.64	22.07
44	8.182	88.91	-3.0	75.91	10.0	79.91	6.0	63.70	22.21
46	7.826	89.09	-3.0	76.09	10.0	80.09	6.0	63.74	22.34
48	7.500	89.25	-3.0	76.25	10.0	80.25	6.0	63.79	22.46
50	7.200	89.40	-3.0	76.40	10.0	80.40	6.0	63.83	22.57

FIG. 6B

RANDOM - ASYMMETRIC PRESSURE ANGLES

"A" PROFILE RANGE



"B" PROFILE RANGE

FIG. 6C

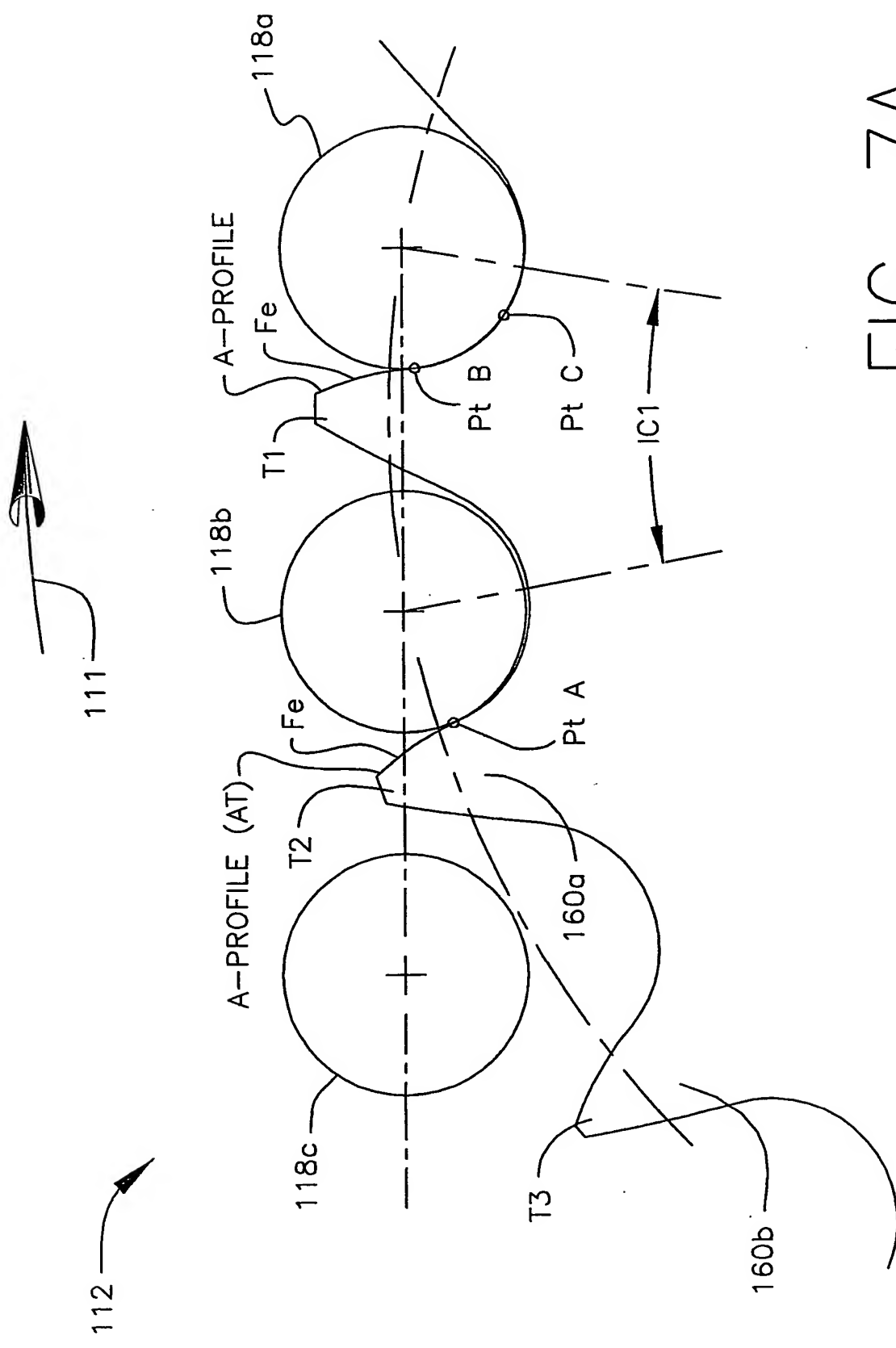


FIG. 7A

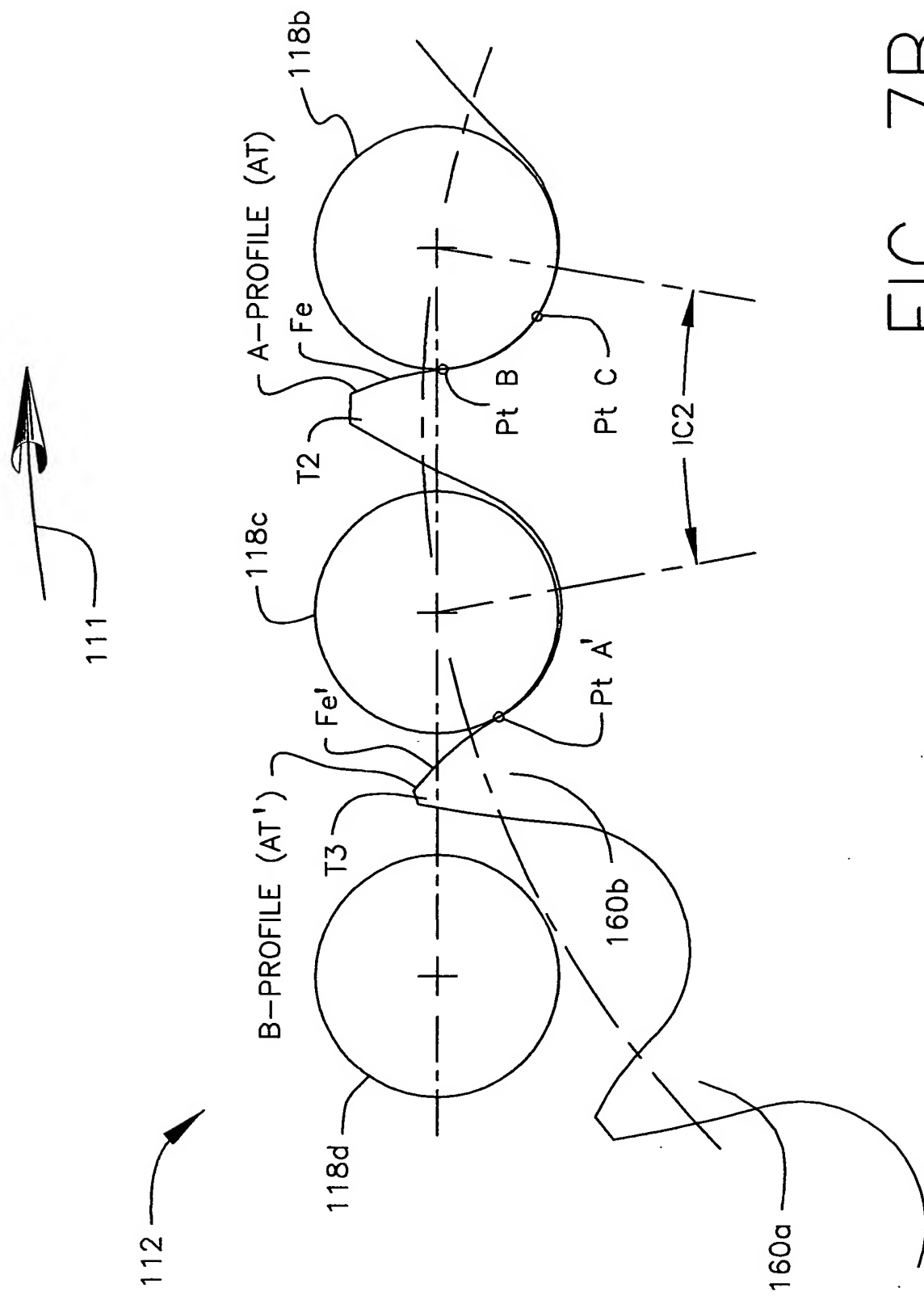


FIG. 7B

INITIAL MESHING CONTACT ANGLES
24 TOOTH SPROCKET
9.525 mm (3/8") PITCH
TOOTH ANGLE = 15°

ADDED CPR	A-PROFILE β_{AT}	IC1	B-PROFILE $\beta_{AT'}$	IC2	IC2 - IC1
(mm)	ANGLE (DEGREES)				
0.050	80.5	15.054	71.5	15.071	0.017
			69.5	15.073	0.019
0.060		15.062	71.5	15.082	0.020
			69.5	15.085	0.022
0.070		15.071	71.5	15.093	0.023
			69.5	15.096	0.026
0.080		15.079	71.5	15.105	0.025
			69.5	15.108	0.029
0.090		15.087	71.5	15.116	0.028
			69.5	15.119	0.032
			68.5	15.121	0.034

FIG. 7C

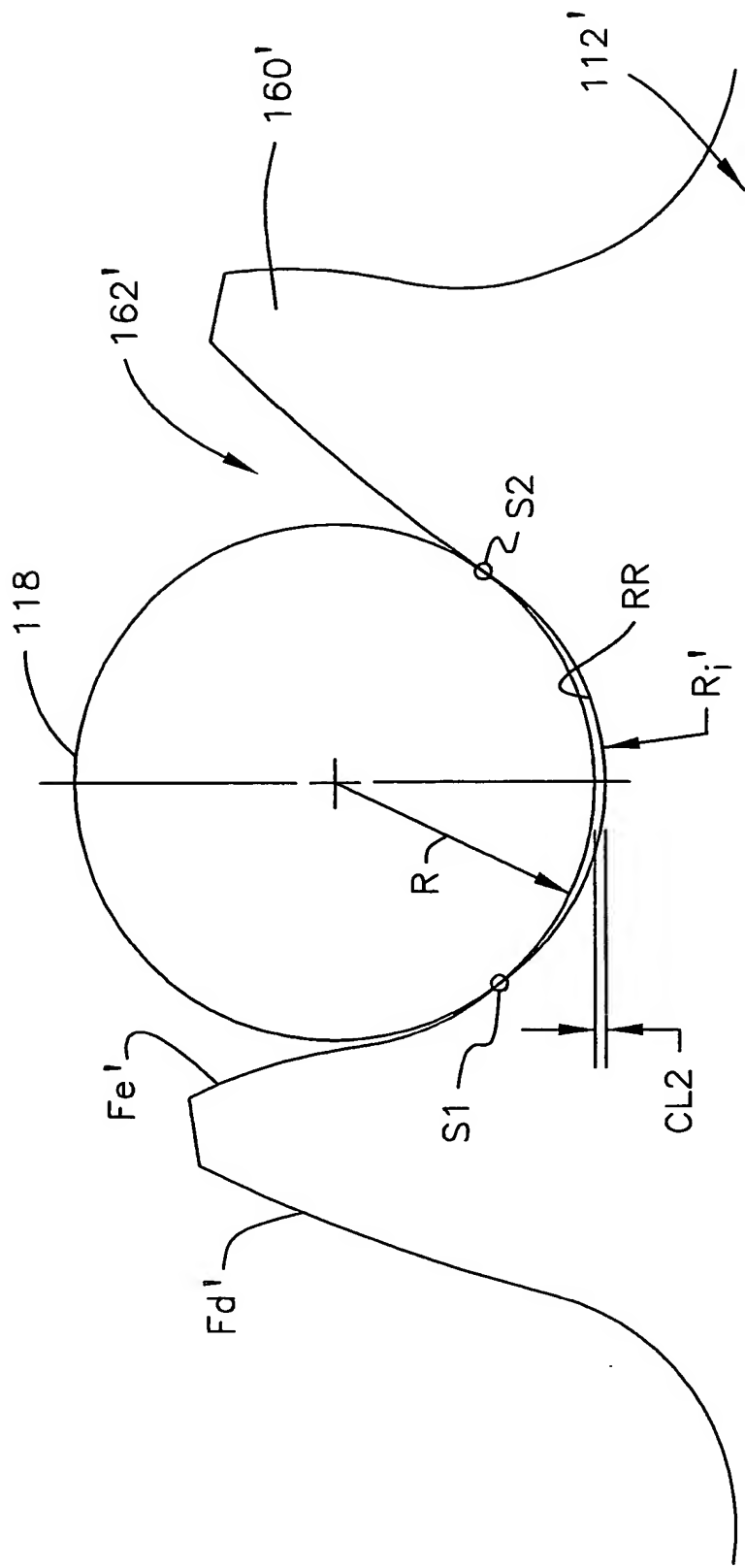


FIG. 8

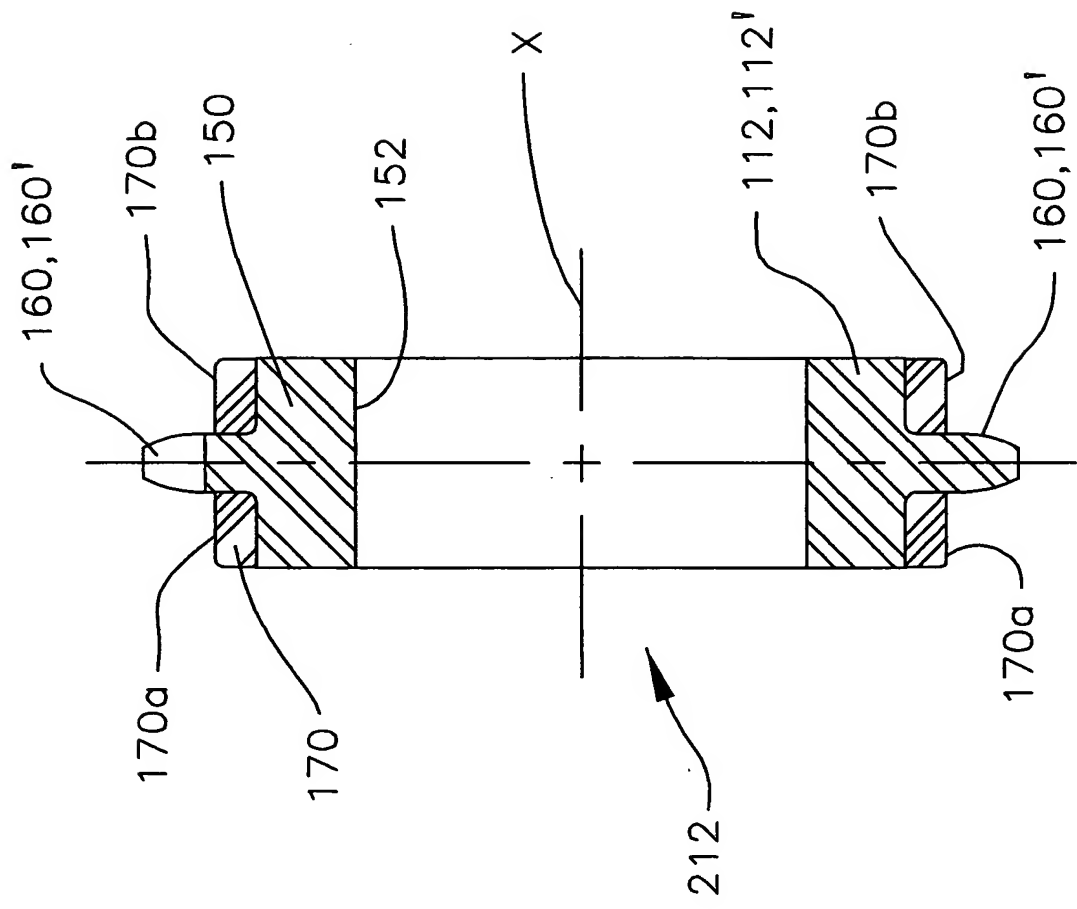


FIG. 9